Edexcel International GCSE Physics 4PH1 Learning Plan

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| **Unit: 8 Astrophysics** | | **Chapter: 28. Cosmology** | | **Hours: 3** |
| Content coverage | Learning outcomes | Resources | Assessment | |
| Section 8: Astrophysics  a) Units  d) Cosmology | **8.13P describe the past evolution of the universe and the main arguments in favour of the Big Bang**  **8.14P describe evidence that supports the Big Bang theory (red-shift and cosmic microwave background (CMB) radiation)**  **8.15P describe that if a wave source is moving relative to an observer there will be a change in the observed frequency and wavelength**  **8.16P use the equation relating change in wavelength, wavelength, velocity of a galaxy and the speed of light**  **8.17P describe the red-shift in light received from galaxies at different distances away from the Earth**  **8.18P explain why the red-shift of galaxies provides evidence for the expansion of the universe** | Video and Powerpoint:  Sectio 6 Lesson 3 - Cosmology  Textbook pages:  Page 271 – The Doppler Effect  Page 273 – The Doppler Equation  Page 273 – Cosmic microwave background (CMB) radiation | Page 274  Questions (1) to (5)  Pages 275 – 276  End of Unit Questions (1) to (9)  Chapter 28 Textbook Answers (PDF)  Chapter 28 Answers to End of Unit Questions (PDF)  Chapter 28 - exam question - pdf  Chapter 28 - exam question mark scheme – pdf  Chapter 28 - Talking paper video | |

Videos – [www.igcsesciencecourses.com](http://www.igcsesciencecourses.com)

Textbook Ref: Edexcel International GCSE (9-1) Physics Student Book - Pearson (Arnold, Johnson, Woolley))